

Agricultural Economy



Bolzer, Inc.

U.S. Agricultural Outlook For 1997

Well into 1997, the U.S. agricultural economy is in a relatively strong position. Farm cash receipts set a record of nearly \$200 billion in 1996, with crop receipts rising substantially above the average of the 1990's and livestock receipts close to the average. This year, total receipts are likely to decline slightly from the record, as lower grain receipts reduce the total return to crops. But livestock receipts will rise as cattle more than offset the decline in dairy.

Overall production expenses, while held in check by lower feed costs, will rise a little. Consequently, net cash farm income is forecast to decline to about halfway between the \$57 billion of 1996 and the \$49 billion of 1995, making it about equal to the average of the 1990's. Areas of concern continue to be those farming regions affected by bad weather, and the financial pressures on cattle and dairy producers who have had to reduce cash balances or incur debt in 1996.

The farm sector balance sheet is expected to improve again in 1997 as asset values rise more than debt increases. Farm real

estate values have risen every year since the mid-1980's, and a 5-percent increase is expected in 1997. Farmers will take on more debt for the fifth year in a row, but the overall debt-to-asset ratio is expected to decline to a healthy range of 14.5-15 percent.

Taxpayers will see stability in farm program costs, with direct government payments forecast at \$7.6 billion for 1997, which would account for only 3.5 percent of gross farm income. By the time the 1996 Farm Act expires in 2002, government payments are expected to drop to 2.6 percent of gross farm income.

Consumers will see a year of modest food price increases in 1997. Meat and dairy product prices will restrain food price increases, keeping them in the range of 2.5-3 percent. In 1996, food prices rose 3.3 percent above the 1995 level but below what many expected given the record-high levels of grain and milk prices.

Macroeconomy Bodes Well For Agriculture

One can go a long way in assessing the prospects for agricultural markets by knowing how strong world food demand will be and how global crop yields will turn out. Although little is known yet about 1997 crop yields, it is possible to learn something about underlying demand by looking at its two major determining factors: global incomes and prices.

The projections and discussion in this article are drawn from a presentation at USDA's 1997 Agricultural Outlook Forum held in Washington, D.C. on February 24-25, 1997. Near-term numbers reflect official USDA data as of February 24, 1997, the date of presentation at the Forum. Long-term numbers were prepared in October through December 1996 and are published in USDA's *Agricultural Baseline Projections to 2005, Reflecting the 1996 Farm Act*, released in February 1997.

Global incomes appear to support strong food demand in 1997, which is good news for food exporting nations such as the U.S. Real global Gross Domestic Product is expected to grow nearly 3 percent—roughly the same as last year's 2.9 percent, but up sharply from the 1.9-percent annual growth during 1990-95. This should help to keep global food demand strong despite high commodity prices.

Almost every major country in the world is expected to have positive real growth in 1997. Each of the 28 OECD economies is expected to grow for the first time in 10 years. The only drag continues to be the Newly Independent States of the former Soviet Union and the Baltics, where positive growth is still a couple of years away.

From a consumer's viewpoint, global commodity prices also look favorable. U.S. farm product export prices have fallen substantially from their second-quarter (1996) peaks and should continue to do so as grain supplies rebuild in 1997.

One price factor to watch in 1997 is exchange rates. The dollar is now about 20 percent stronger against the yen than in 1995. That has the effect of raising U.S. export prices and will partly offset some of the U.S. crop price declines in 1997. It will especially hurt meat and other high-value exports whose prices are not dropping in 1997. The stronger dollar will also add to the overall U.S. trade deficit, which will be a restraining factor in U.S. economic growth. Even so, the U.S. economy is expected to grow at about 2.5 percent during 1997.

Some positive news for U.S. exporters is that, although the dollar is strengthening generally, its real value—in agricultural trade-weighted terms—is now only moderately above the level of the past 2 years when measured against West European and Asian currencies, excluding Japan. And the Mexican peso continues to show stability at about 7.9 pesos per dollar.

Two key factors influencing farmers' costs are energy prices and interest rates. Farmers faced 11-percent-higher fuel costs in 1996, spending a total of \$6.3 billion as crude oil prices rose from \$17 a

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Economic Indicators Point to a Healthy U.S. Farm Sector

	Average 1990-94	1995	1996	1997
<i>\$ billion</i>				
Farm receipts ¹	182	186	200	194
Agricultural exports	41	55	60	57
CCC outlays ²	11	6	5	8
Government payments	10	7	8	8
Balance sheet aggregates				
Assets	880	978	1,035	1,094
Liabilities	141	151	155	159
Equity	739	827	880	935
<i>\$/acre</i>				
Farm real estate	723	832	890	N/A ³
Returns by commodity ⁴				
Corn	167	192	203	197
Wheat	88	98	115	80
Soybeans	133	163	185	175
Cotton	224	150	286	226
<i>\$/cow</i>				
Cow/calf	86.3	-17.7	-39.0	-27.2
<i>\$/cwt</i>				
Hogs	7.0	5.4	11.0	13.5
Chickens	4.8	7.6	4.4	4.6
<i>\$/cwt of milk</i>				
Dairy	2.3	2.2	2.3	2.0

1996 forecast; 1997 projected. Dairy data are on a marketing-year basis; all other data are on a calendar-year basis unless otherwise indicated.

1. Includes farm-related income. 2. Fiscal year. 3. Not available. 4. For **crops**: returns over variable costs for program participants and soybean producers for crop years; for **cow/calf**, **hogs (farrow-to-finish)**, and **dairy**: returns over cash costs; for **chickens**: returns over total costs.

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barrel in 1995 to more than \$22 in late 1996. Fuel spending will be up a little in 1997, but crude oil prices are expected to drop back down toward \$20 as the year unfolds.

Interest rates could be slightly higher in 1997, reflecting the above-trend growth in the U.S. Gross Domestic Product of the past few quarters and the tighter labor market. However, the outcome will depend on the Federal Reserve Board, which will be considering the offsetting effects of lower expected food and energy price increases and lower prices for imports due to the strength of the dollar.

Farmers' total interest expenses will likely be a little over \$13 billion, about the same as in the past 2 years.

Behind the aggregate farm-sector numbers are varying circumstances across commodities that shape near-term conditions in agricultural markets and the U.S. farm economy. In addition, the pieces of several remaining puzzles must come together before this outlook becomes a certainty. These involve grain prices, planting flexibility, ethanol production, the cattle cycle, and price volatility.

Crop Market Developments

A year ago, this forum was deeply concerned about the looming shortage of grains and the prospect of a major disruption of livestock production and escalating consumer food prices. Corn, wheat, and soybean prices had seen a 10-16-month runup, and further price increases were anticipated. Grains did turn out to be in short supply, and prices soared to

levels not predicted at this Forum or anywhere else, as grain stocks reached record or near-record lows and domestic and export demand was strong.

A year later, the moderating effect of larger 1996 crops is evident. Monthly average farm-level wheat prices fell steadily from last May's record high to below \$4 per bushel in January—a 31-percent drop. Corn prices declined by about 41 percent from the record high last July, leveling out to \$2.63 per bushel in December and January. In contrast, soybean prices, while they declined 12 percent through November from their August peak, have increased since then to \$7.16 per bushel in January.

Wheat prices are expected to remain under considerable pressure as U.S. and global carryover stocks rise, although not to high levels by historical standards. Last year's high wheat prices caused foreign wheat acreage to expand by 5 percent, resulting in a harvest of record or near-record crops. That was the largest annual increase in foreign wheat area recorded in the USDA database, which starts in 1960.

Outlook Puzzle Number 1: How Low Will Wheat Prices Go?

Averaged over the 1980-95 period, farm prices for wheat bottom out in July at about 94 percent of the season average and peak in May at 106 percent. Based on the forecast season-average price for wheat of \$3.45 per bushel for 1997/98, monthly prices would reach a low of \$3.25 per bushel in July and rise to \$3.65 by May 1998.

However, in years of significant stock growth since 1980—when stocks rose 20 percent or more from the previous year—wheat prices exhibited a different pattern. Starting higher and declining earlier in the crop year, prices reached a trough in late summer before generally rising through early May, but remained below the price-pattern average across all years. Under this stocks-growth pattern, 1997/98 wheat prices would bottom out at about \$3.35 in September, rising to \$3.55 in May 1998.

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Outlook Puzzle Number 2: Will Ethanol Perform?

High corn costs led corn used in ethanol to fall to 396 million bushels in 1995/96, down 26 percent from a year earlier. Corn costs will be lower this year and gasoline prices a little higher than in recent years, so a recovery to 440 million bushels is expected for 1996/97. Further gains are expected in 1997/98, but it will likely be at least another year before corn use for ethanol reaches 1994/95's 533 million.

The peak ethanol production period is in the fall and early winter when high-fructose corn syrup (HFCS) production is down and the winter oxygenate program is in effect. But ethanol production this past fall did not snap back sharply, limiting this season's prospects, although year-over-year production increases are likely as the year progresses. While corn used in ethanol between 1994/95 and 1996/97 is expected to drop by about 90 million bushels, corn for HFCS and beverage alcohol is expected to rise about 60 million. Increasing HFCS and beverage alcohol exports will help support corn industrial use while ethanol recovers.

Outlook Puzzle Number 3: What Will Farmers Plant This Spring?

In 1996, 335 million acres was planted to principal crops, the highest level since 1986 and up nearly 17 million acres from 1995. With producers responding to rising prices, corn and wheat acreage accounted for 90 percent of the increase. Sorghum and soybean acreage was also up, while rice, cotton, and minor oilseed acreage was down.

The amount of cropland available for 1997 planting to principal crops is as large as last year, and as much as 1 to 2 million acres withdrawn early from the Conservation Reserve Program (CRP) in 1996 might be planted. About 22 million acres currently enrolled in the CRP are under contracts that expire at the end of September, and some of that acreage is likely to be available for 1998 planting.

Planted acreage this year is likely to be down slightly from 1996, largely because of plantings of other crops on failed wheat acres last year. Land that is planted to wheat, then replanted to another crop such as sorghum, is counted twice in the planted acres total. Total wheat acreage is expected to be down because of the 7-percent decline in winter wheat acreage and lower price expectations than a year ago for spring wheat plantings.

Corn and soybean acreage is likely to increase, capturing some of the wheat land. Corn could total 81 million acres, near where it might have been last year had planting weather not been bad. Soybeans, with current favorable prices, could reach 64.5 million acres or even exceed 65 million, the highest since 1984. Rice acreage may increase marginally to 2.9 million with favorable prices, and cotton acreage could decline slightly to 13.8 million, as feed grains and soybeans look attractive.

Although larger stocks of wheat and corn than a year earlier will be carried into 1997/98, U.S. grain stocks are relatively tight, and soybean stocks are the lowest since 1976. With normal weather, 1997/98 could see wheat production match 1996's 2.28 billion bushels and stocks rise toward 550 million bushels. Corn production could total close to 9.6 billion bushels, the second highest ever, and stocks could rise to more than 1.2 billion bushels. Soybean production could total 2.5 billion, and with lower exports, stocks could rise to 220 million bushels. Season-average prices would be below 1996/97 and export supplies would rise. But U.S. crops will face especially strong competition, given large competitor supplies.

Reduced yields in the U.S. made it the only major wheat exporter with a decrease in wheat supplies in 1996/97. As a result, U.S. exports declined. U.S. wheat sales have plummeted in recent months as foreign exporters such as Argentina and Australia have traded aggressively. U.S. sales are expected to remain slow through this summer because of continued large exportable supplies in competing countries.

For the 1997/98 season, U.S. wheat production is expected to be similar to this year. However, smaller crops are expected in all the major exporting countries except the European Union (EU). This should provide an opportunity for a recovery in U.S. exports from the reduced level of 950 million bushels expected this season. However, the degree of recovery will depend on the size of the U.S. crop, and on whether China's wheat imports bounce back from the 4 million tons expected this season to something nearer the 10-million-ton average of the previous 5 years.

This year's *corn* prices may be relatively firmer than wheat. While corn carryover stocks are expected to more than double by September, they are still expected to be relatively tight, below 1 billion bushels. Feed and industrial uses are rising. However, exports will be down this season, as corn from Argentina, South Africa, and China, and barley from Canada and the EU, are providing increased competition. In 1997, U.S. production is forecast to rise again, but higher exports and domestic use during the 1997/98 marketing year are expected to limit the increase in carryover stocks to only about 300 million bushels by September of 1998.

Soybean stocks are declining, in contrast to wheat and corn. By this September, U.S. soybean stocks are projected to be the lowest in 20 years, which will mean an increase in farm-level soybean prices in 1996/97. What is going on?

First, Brazil had a reduced crop last year, which opened markets globally for the U.S. and even made Brazil a U.S. customer this past fall. Second, China imported record quantities in October-

December—950,000 tons of soybean meal compared with zero the year before. That is nearly 8 percent of total world trade purchased in one calendar quarter by one country.

However, China's needs appear to be met, and record soybean production in both Argentina and Brazil has started coming to market. As a result, U.S. exports are expected to slow during the March-September period. In 1997, a modest increase in U.S. production and a return to a more typical export level is expected, which should raise 1997/98 carryover stocks and reduce prices.

For *cotton*, extremely tight U.S. stocks last summer led to imports of 800,000 bales, making the U.S. a large cotton importer. However, imports have slowed to a trickle since completion of the second-largest U.S. cotton harvest ever. Stocks will rise 80 percent by August, despite larger U.S. mill use buoyed by the continuing strong economy and increased cotton textile exports.

Raw cotton exports continue to decrease in the face of 10 straight years of flat global demand and reduced imports by China. In the Western Hemisphere, cotton use continues to grow, but elsewhere in the world, growth in textile demand is increasingly being met by manmade fiber, a challenge the U.S. cotton industry must deal with if exports are to grow in the future.

The *rice* outlook has taken a surprising turn, reflecting reduced returns to planting under the 1996 Farm Act. Production and exports were down in 1996 as expected. However, late harvests in Asia and tight long grain supplies worldwide boosted international prices in December and January. As a result, U.S. rice area may actually increase in 1997.

For *sugar*, the major development is the level of imports under the tariff-rate quota in 1996/97. That level is now expected to total 2.27 million short tons, after the January tariff-rate-quota allocation of 220,000 tons was canceled because the forecast U.S. stocks-to-use ratio was above 15.5 percent. (The March allocation has been authorized.) Imports

Outlook Puzzle Number 4: What Are the Risks of the Cattle Cycle's Downhill Phase?

The 101-million-head inventory on January 1 marks the start of the downturn in the cattle cycle. Cattle cycles over the past several decades have averaged 6 years of cattle-number building, followed by 4 years of declining.

So for some time into the future, fewer calves will be born, fewer heifers will be retained, fewer feeder calves will be available to feedlots, fewer steers will be fed and slaughtered, and lower retail supplies of beef will be available. This could go on for several years. In 1996, beef production was up 1.2 percent. In 1997, a slight decline is expected, and in 1998, a decline of 4 to 5 percent.

Feedlots will have to pay more for a reduced supply of feeder cattle. If corn prices come down, feedlots will want feeder cattle even more. Feeder cattle prices could become quite strong next fall and into 1998. By late 1997, fed cattle could be over \$70 per cwt, as they were this past fall, but feeder cattle could be in the mid-\$70's, compared with the mid-\$60's this past fall.

This will mean better news for cow-calf producers. After taking losses estimated at \$18 per cow in 1995 and \$39 in 1996, returns, although still negative, could improve in 1997. By 1998, returns should be strongly positive, which would provide an incentive to rebuild herds. But once that decision is made, the biological lags mean another 2-3 years before cattle inventories stop the decline.

Combine this story with the fact that grain stocks, particularly corn and soybean, remain relatively low. A bad weather year in 1997 could again cause high feed prices, resume the heavy herd liquidation, halt rebuilding of the hog breeding inventory, and set the stage for a serious increase in retail beef and other meat prices in 1998. Because meat and poultry accounts for 15 percent of the at-home CPI for food, such a scenario would be a concern for consumers.

remain well above the legislated trigger of 1.5 million tons. Thus price support loans will continue to be nonrecourse.

Among *fruits and vegetables*, the recent Florida freeze demonstrates weather will play a critical role in production. Sharp losses of snap beans, squash, tomatoes, and peppers have boosted prices and will likely cause the consumer price index (CPI) for fresh vegetables during January to June to be more than double the pre-freeze expected increase.

Livestock & Poultry Market Developments

One of the most startling developments in the recent outlook has been in the *cattle* market. First, the cattle cycle turned, and second, the export boom went flat. Over the past year and a half, drought, record-high feed grain prices, high hay prices, low cattle prices, and adverse winter weather have persistently forced cows to

slaughter. In 1996, both calf and beef cow slaughter rose 24 percent.

Although large late-summer and fall placements into feedlots are keeping beef supplies up now, the January 1, 1997 U.S. cattle inventory showed the impact of ranchers' efforts to reduce herds. Cattle on farms and ranches totaled 101.2 million at the start of 1997, down more than 2 percent from the 103.5 million at the start of 1996 and the first decline in the U.S. cattle inventory since 1990.

Adding to the grief of ranchers, exports declined about 12 percent year-to-year during the second half of 1996 after growing a robust 20 percent above a year earlier in the first half. Exports had increased at an annual average rate of 16 percent from 1991 to 1995. In Japan, where more than half of U.S. beef exports went in 1996, concerns over *E. coli* and BSE appear to have slowed consumption. In 1997, U.S. beef exports are expected to

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Outlook Puzzle Number 5: Is Price Volatility Really More of an Issue Today?

With low and capped marketing loan rates, minimal government stocks, and the elimination of acreage reduction programs, some are concerned that agricultural commodity prices will be more volatile. This concern has been amplified by tight grain stocks and the runup and decline in grain prices over the past 2 years. This, in turn, has affected livestock, poultry, and milk markets. A common premise is that prices will be more volatile without government intervention and with privately held stocks that are smaller than past levels of stocks owned or supported by the government.

Are prices now more volatile than in the past? For corn and wheat, both farm and futures prices were more volatile in 1996 than over 1991-95. Was this volatility indicative of an inherently less stable agricultural sector structure or, instead, the result of year-specific external factors such as weather? Further, whether this is indicative of more volatile prices in the years ahead remains to be determined.

Farmers and first buyers have reason to be concerned. Greater planting flexibility, trade liberalization, and more private stockholding tend to be stabilizing forces. But several factors suggest greater variability in the future. These include smaller government stocks and greater exposure to foreign policy shifts and foreign supply shocks as trade liberalization becomes more important.

From a producer perspective, more volatile prices than in the past could signal a need for risk management tools to deal with price and income variability. Moreover, producers can no longer transfer price risks to the government through high nonrecourse loan rates and storage subsidies. Instead, they will rely on private-sector risk management mechanisms.

In 1997, U.S. agriculture will continue to adjust to the increasing risks that accompany changes in domestic farm and trade policy as well as the profusion of emerging technologies and marketing arrangements. These risk-creating changes will also provide the chance to lower costs, improve products, shift risks, and open new markets internationally.

rise, especially in the second half, particularly to countries like Mexico and South Korea and to Japan, although the rising dollar is a new factor that could limit increases.

The *hog* inventory, like cattle, is down compared with a year ago, and pork production in early 1997 will likely be below last year's level. Producers indicated plans to increase farrowings in the first quarter of 1997, then pull back during the

second. If they follow through, pork production would pick up by the third quarter, but for the year as a whole would remain about the same as in 1996. With production stable and increased exports expected, hog prices may average about \$2 per cwt over the 1996 average of about \$53.50 per cwt.

Broiler exports, fueled by economic growth around the world, have been a remarkable story in the 1990's that will

continue in 1997. Exports were equal to 6 percent of U.S. production in 1990 and over 17 percent in 1996. Record-high broiler prices in 1996, declining feed costs in 1996/97, and firm meat prices in 1997 suggest a 6-percent rise in broiler production this year. Poultry will account for all of the increase in 1997 U.S. meat production. Exports are forecast up again to major buyers—Russia, Hong Kong, China, and Japan.

Turning to the *dairy* market, U.S. farmers' milk receipts were a record \$23 billion in 1996, making milk one of agriculture's major commodities. Although many producers enjoyed record-high incomes, many did not—particularly those facing high feed costs, poor forage, and low productivity. In addition, milk prices fell sharply between September—when a record high was reached—and December. In January 1997, the all-milk price was \$13.60—40 cents below a year earlier and well below the 1995/96 record \$14.42.

The all-milk price has been declining the past couple of months. Dairy producers are expressing concern over the decline and calling for various forms of Federal action. Given underlying conditions, however, it is likely that the market will improve for dairy producers.

Milk production for calendar-year 1997 is forecast to rise only 1 percent over 1996, which was down 1 percent from 1995. So the market is in balance, with milk production rising with population, and government surplus removals on a milkfat basis are expected to be about 0.6 billion pounds, the second lowest in the last 27 years. In that environment, the all-milk price is expected to rise this spring and average \$13.70 for the calendar year, the second highest in the past 16 years.

Keith Collins

Chief Economist, USDA 